

(12) UK Patent Application (19) GB (11) 2 173 868 A

(43) Application published 22 Oct 1986

(21) Application No 8608580

(22) Date of filing 9 Apr 1986

(30) Priority data

(31) 8510620

(32) 11 Apr 1985

(33) DE

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(51) INT CL⁴

F16C 33/20

(52) Domestic classification (Edition H):

F2A 115 151 154 155 D44 D46

U1S 1226 1227 F2A

(56) Documents cited

GB A 2153927

GB 1438327

GB 1240885

GB A 2097486

GB 1399144

GB 0831807

GB 1440931

GB 1241966

(58) Field of search

F2A

(54) Laundry care appliance
particularly a laundry drier or
washing machine

(57) A laundry care appliance,
particularly a laundry drier or washing
machine, has a laundry drum (2)
which can be driven and to one end
(4) of which, in the region of its
centre, there is secured a journal (5)
which is mounted in a corresponding
drum journal bearing (6) preferably
consisting of a bronze sinter alloy. A
sliding element of a temperature-
resistant plastics material, which is
formed from a bush or sleeve or a
sheet wound round the journal, is
disposed in the drum journal bearing
(6) or on the journal (5).

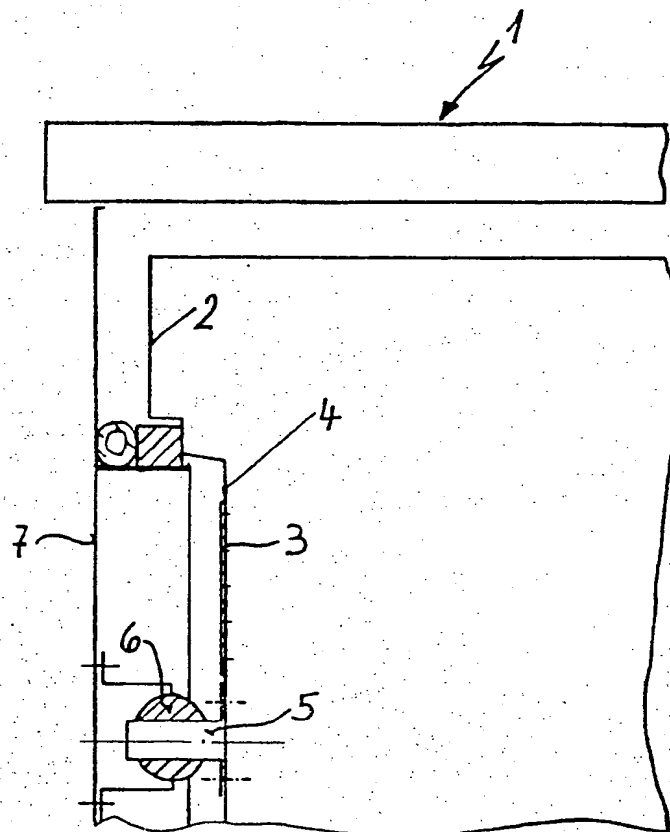


Fig. 1

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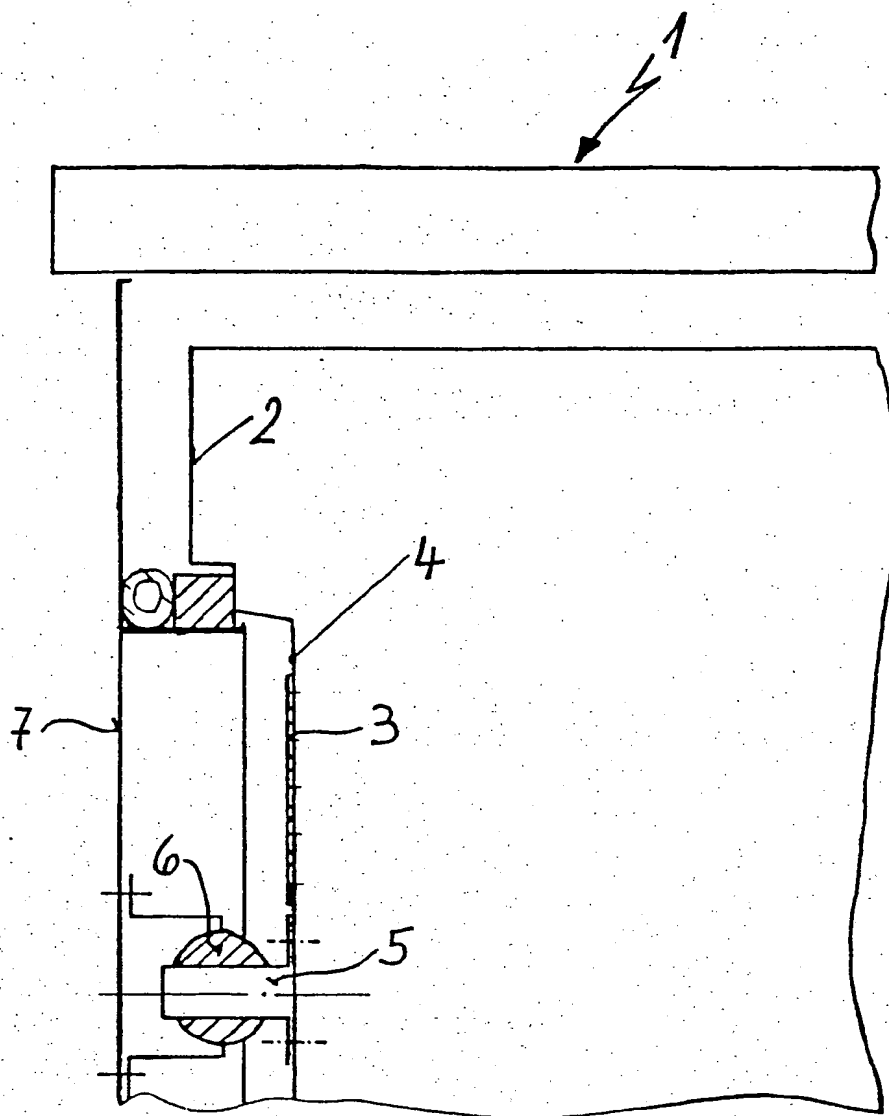
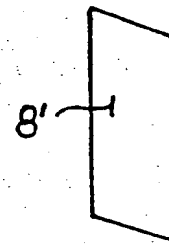
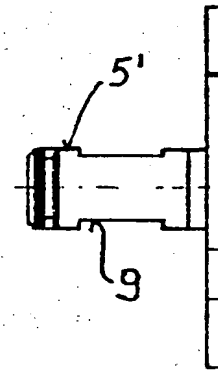
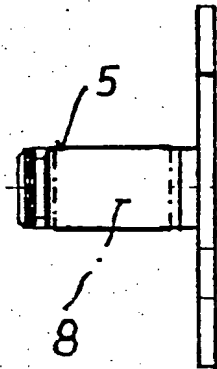
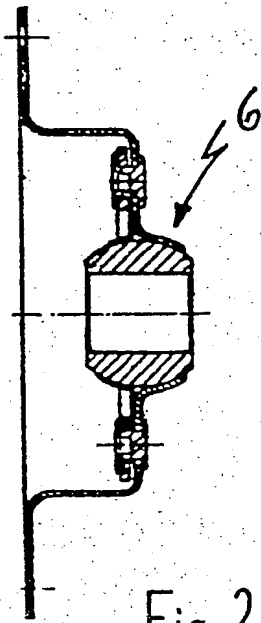


Fig. 1



SPECIFICATION

Laundry care appliance, particularly a laundry drier or washing machine

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This invention relates to a laundry care appliance, particularly a laundry drier or washing machine.

10 A laundry drier having a laundry drum which can be driven is known from the DE-OS 31 32 737, to the rear end of which drum, in the region of its centre, there is secured a journal which is mounted in a corresponding drum journal bearing. Such drum journal bearings
15 usually consist of a bronze sinter alloy. In order to eliminate wear phenomena as a result of mechanical abrasion to a large extent both on the journal and in the drum journal bearing, it is essential to provide a suitable viscous
20 lubricant in the drum journal bearing. During the operation of the laundry drier, however, this lubricant is exposed to the action of high temperatures because the hot stream of drying air conveyed through the laundry drum in
25 circulating operation is necessarily also conveyed over or past the drum journal bearing. The consequence of this is that often after only a short period of operation, the lubricant loses its properties which promote sliding, as
30 a result of drying up or becoming resinous and after that the mechanical abrasion at the journal and drum journal bearing is exacerbated. A further consequence of this is the increase in unpleasant operating noises during
35 the rotation of the laundry drum. There is then also the danger that as a result of excessive mechanical wear of the journal, the laundry drum may be caused to lose its equilibrium as a result of deflection of the journal axis during
40 rotation. In particularly unfavourable circumstances, this can then lead to a fracture of the journal and/or to a worn drum journal bearing.

It is an object of the invention to reduce the disadvantages outlined above, by simple
45 means, and to ensure an effective and long lasting reduction in friction between the journal and the drum journal bearing.

The invention accordingly provides a laundry care appliance having a laundry drum which
50 can be driven and to one end of which, in the region of its centre, there is secured a journal which is mounted in a corresponding drum journal bearing wherein a sliding element of a temperature-resistant plastics material is disposed in the drum journal bearing or on the
55 journal.

As a result of the arrangement of the invention, a satisfactory sliding action for the laundry-drum journal in the drum journal bearing is
60 achieved by simple means which, in a surprising manner, has an extremely satisfactory resistance to the effects of high temperature, for a long time. A long life of the laundry drum bearing arrangement is thus ensured
65 with extremely quiet running of the drum ow-

ing to the avoidance of metal-to-metal contact. There is likewise no longer the danger of resinification or drying up of the lubricant as is the case with viscous lubricants. The advantages achieved must be attributable to the satisfactory cooperation between the drum journal bearing, preferably consisting of a bronze sinter alloy, and the plastics sleeve or plastics bush fitted to the journal.

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The invention is illustrated by way of example in the accompanying drawings, in which:

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Figure 1 is a sectional elevation of a detail from a laundry drier, showing the connection of the laundry drum with its drum journal in the rear drum journal bearing,

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Figure 2 is a similar view of the drum journal bearing illustrated alone on a larger scale,

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Figures 3 and 4 are respectively side elevations of two embodiments of a laundry-drum journal, illustrated alone on a larger scale, and

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Figure 5 is a plan view of a sliding element in the form of a flat sheet which can be applied to the journal shown in *Fig. 4*.

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Referring to the drawings, the laundry drier 1 indicated in *Fig. 1* has a laundry drum 2 which can be driven and to the rear end 4 of which, provided with outlet apertures 3 for drying air, there is secured a laundry-drum journal 5. The laundry-drum journal 5 is received in a corresponding drum journal bearing 6 which is mounted on the back 7 of the laundry drier housing. The drum journal bearing 6 may appropriately consist of a bronze sinter alloy. In an advantageous manner, a sleeve or bush 8 of a temperature-resistant plastics material is fitted on the journal 5. It would also be advantageous to press the sleeve or bush 8 into the drum journal bearing
105 6. A material which may appropriately be reinforced with glass fibre or carbon may be considered as a plastics material. The sleeve or bush is applied to the journal 5 by a pressing-on operation.

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It would also be advantageous to provide the journal 5' with an encircling depression 9 to receive the plastics sliding sleeve or a sliding element 8' formed from a plastics sheet (about 1mm thick).

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CLAIMS

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1. A laundry care appliance having a laundry drum which can be driven and to one end of which, in the region of its centre, there is secured a journal which is mounted in a corresponding drum journal bearing, wherein a sliding element of a temperature-resistant plastics material is disposed in the drum journal bearing or on the journal.

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2. A laundry care appliance as claimed in Claim 1, wherein said drum journal bearing consists of a bronze sinter alloy.

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3. A laundry care appliance as claimed in Claim 1 or 2, wherein the sliding element is a bush or sleeve or a sheet wound round the

journal.

4. A laundry care appliance as claimed in any one of Claims 1-3 wherein said plastics material is reinforced with glass fibre or carbon.

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5. A laundry care appliance as claimed in any one of Claims 1-4, wherein said journal is provided with an encircling depression to receive the sliding element.

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6. A laundry care appliance substantially as described herein with reference to the accompanying drawings.

Printed in the United Kingdom for
Her Majesty's Stationary Office, Dd 8818935, 1986, 4235.
Published at The Patent Office, 25 Southampton Buildings,
London, WC2A 1AY, from which copies may be obtained.